

I CLAIM:

Sub 1. A device to contact in electrically conducting manner
an electrically conducting part of in particular an elongated,
illustratively cylindrical body, for instance a pipe or a
cable, comprising a base structure fitted with a rest surface
to rest against the body to be contacted and further fitted
with contact means to implement an electrically conducting
connection between the body to be contacted and a conductor,
for instance a grounding cable,

characterized in that

the base structure (4) comprises at least one electrically
conducting contact protrusion (40) projecting to the rest
surface (42, 44) in such manner that in the assembly position
it will rest against the electrically conducting part (6) of
the body to be contacted (8) and thereby constitutes the
contact means.

2. Device as claimed in claim 1, characterized in that
the - or each - contact protrusion (40) consists of a part
firmly joined to the base structure (4).

Sub 3. Device as claimed in claim 1, characterized in that
the - or each - contact protrusion (40) is metallic.

4. Device as claimed in claim 1, characterized that the
- or each - contact protrusion (40) is integral with the base
structure (4) or with part of the base structure (4).

5 5. Device as claimed in claim 1, characterized in that the - or each - contact protrusion (40) is elastically deformable in such manner that in the assembly position it will resiliently rest against the electrically conducting part (6) of the body to be contacted (8).

6. Device as claimed in claim 1, characterized by spring means to bias the - or each - contact protrusion (40) toward the body to be contacted (8).

Sub 7. Device as claimed in claim 1, characterized in that the base structure (4) is flexible.

15 8. Device as claimed in claim 1, characterized in that the base structure (4) comprises a band-shaped or plate-shaped contact element (10) made of an electrically conducting material, preferably a metal.

20 9. Device as claimed in claim 8, characterized in that in its assembly position the base structure (4) comprises at its side facing the body to be contacted (8) at least one projection on which is held the contact element (10) and in this manner forms the contact protrusion (40).

25 10. Device as claimed in claim 8, characterized in that the - or each - contact protrusion (40) is formed at the side of the contact element (10) facing the body to be contacted (8) in the assembly position.

Sub 11 11. Device as claimed in claim 10, characterized in that the - or each - contact protrusion (40) consists of an embossing in the contact element.

5 *12* 12. Device as claimed in claim 11, characterized in that the - or each - embossing is formed by a salient which is cross-sectionally convex toward the body to be contacted (8) in the assembly position or by a bead (58) projecting toward the body to be contacted (8).

10 *Sub 13* 13. Device as claimed in claim 10, characterized in that the - or each - contact protrusion (40) consists of a blade (52) projecting toward a side of the base structure (4) facing the body to be contacted (8) in the assembly position.

15 14. Device as claimed in claim 13, characterized in that the - or each - blade (52) is stamped out of the contact element (10).

20 *15* 15. Device as claimed in claim 8, characterized in that part of the contact element (10) is led out the base structure (4) to its side away from the body to be contacted (8) in its assembly position or that the contact element (10) is electrically connected with a part (66) led out to this side
25 of the base structure (4).

Sub 16 16. Device as claimed in claim 1, characterized in that the base structure (4) is designed in such manner that in the

assembly position it encloses the body to be contacted (8) in particular in annular manner or like a bush.

5 *ab* 17. Device as claimed in claim 1, characterized the base structure (4) is designed as a clamp which can be tensioned around the body to be contacted (8).

10 18. Device as claimed in claim 16, characterized in that the - or each - contact protrusion (40) consists of a radial projection.

15 19. Device as claimed in claim 16,, characterized in that the - or each - contact protrusion (40) runs in the circumferential direction of the base structure (4) substantially over the entire length of the base structure (4) in this direction.

20 *Sub a7* 20. Device as claimed in claim 16, characterized in that at least two contact protrusion (40, 48, 50) are mounted in mutually spaced manner in the circumferential direction of the base structure (4), preferably along one circumferential line.

25 21. Device as claimed in claim 16, characterized in that the base structure (4) consists of at least two mutually connectable parts consecutive along the circumference of the body to be contacted (8) in the assembly position.

Sub 48) 22. Device as claimed in claim 16, characterized in that the base structure (4) is integral and circumferentially open and at its ends comprises brackets (12, 14) which are connectable in the assembly position.

23. Device as claimed in claim 22, characterized in that the brackets (12, 14) can be connected to each other by means of screws or a clamp.

24. Device as claimed in claim 8, characterized in that the base structure (4) comprises an elastic part (22) of which the side facing the body to be contacted (8) in the assembly position where called for is connected to the contact element (10).

25. Device as claimed in claim 24, characterized in that the part (22) made of an elastic material constitutes a coating of the contact element (10) or in that the contact element (10) is imbedded at least in part in the elastic material.

26. Device as claimed in claim 24, characterized in that the elastic material is an elastomer, in particular a thermoplastic elastomer.

27. Device as claimed in claim 16, characterized in that the contact element is connected to the radial inside surface of the elastic part (22) and in that a band-shaped tensioning

element (64) to tension the device (2) around the body to be contacted (8) is mounted, preferably firmly to the elastic part (22), at the radial outside surface of the elastic part (22).

28. Device as claimed in claim 27, characterized in that the tensioning element (64) is metallic and that the contact element (10) is connected in electrically conducting manner to the tensioning element.

Subag 29. Device as claimed in claim 8, characterized in that the contact element (10) is fitted with terminals to hook up a conductor, for instance a grounding cable (20) in such manner that the conductor by means of the contact element (10) resting against the body to be contacted (8) in the assembly position can be connected in electrically conducting manner to the body to be contacted (8).

30. Device as claimed in claim 22, characterized in that the contact element (10) constitutes the brackets (12, 14) or extends into the brackets (12, 14) and in that one bracket (12) comprises at least one aperture (16) and the other bracket (14) comprises at least one threaded borehole opposite the aperture (16) in the assembly position, in such manner that, in the assembly position, the brackets, (12, 14) by means of at least one electrically conducting metal screw (18) passing through the aperture (16) and engaging the threaded borehole, can be connected to each other and to the conductor,

29 illustratively a grounding cable (20), and thereby form the hookup means.

5 31. Device as claimed in claim 24, characterized in that the elastic material at least in part consists of an electrically conducting elastic material and in that the elastic part (22) comprises at least one protrusion constituting the contact protrusion (40).

10 32. Device as claimed in claim 31, characterized in that electrically conducting masses or particles are imbedded in the elastic material to implement electrical conductivity.

15 33. Device as claimed in claim 32, characterized in that the electrically conducting masses or particles are substantially uniformly distributed in the elastic material.

20 34. Device as claimed in claim 32, characterized in that the electrically conducting masses or particles consist of graphite and/or soot and/or metal, in particular of metal powders or metal fibers.

25 35. Device as claimed in claim 1, characterized in that the - or each - contact protrusion (40) projects so far beyond the rest surface of the base structure (4) that in the assembly position it comes to rest against an electrically conducting part (6) of the body to be contacted (8) which

2 recoils opposite a part of the body to be contacted (8) supporting the rest surfaces (42, 44) of the base structure (4).

5 36. Device as claimed in claim 1, characterized in that the device (2) comprises sealing means to seal a space subtended in the assembly position between the body to be contacted (8) and the base structure (4) against penetration by air and/or moisture.

10 37. A device as claimed in claim 36, characterized in that the sealing means are fitted with elastic sealing lips (30, 32) at a side of the base structure (4) facing the body to be contacted (8) in the assembly position, said sealing lips (30, 32) being mutually apart in the axial direction of the base structure and running in the circumferential direction of the base structure (4), preferably over the full length of the base structure (4) in this direction and resting in the assembly position of the device of the invention (2) in sealing manner against the outside surface of the body to be contacted (8).

20 38. Device as claimed in claim 37, characterized in that the rest surface (42, 44) of the base structure (4) consists of sealing surfaces of the sealing lips (30, 32) to rest against the body to be contacted (8).

Sub 39. Device as claimed in claim 36, characterized in that
the sealing means comprise sealing surfaces constituted by
mutually facing surfaces of the bracket (12, 14) in the
assembly position and made of an elastic material or
sandwiching an elastic sealing element between them in the
assembly position, the sealing surfaces in the assembly
position resting in sealing manner against each other or
against the sealing body and tightly adjoining the sealing
lips in the circumferential direction of the base structure
(4).

40. Device as claimed in claim 1. characterized in that
the contact element (10) and/or the tensioning element (64)
are made of brass and/or high-strength brass and/or low-alloy
copper.